

What is claimed is:

1. A pulse radar apparatus which detects a target by transmitting a pulse signal, comprising:

5 a control pulse generation unit generating a control pulse signal by delaying a basic signal in generating a transmission pulse; and

a gate unit performing a gate operation on a received signal using the control pulse signal.

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2. The apparatus according to claim 1, further comprising:

a detection unit detecting an output of said gate unit; and

15 a distance computation unit computing a distance to a target as associated with a delay amount which shows a maximum value of a component corresponding to amplitude of a received signal using an output of said detection unit when said
20 control pulse generation unit changes the delay amount.

3. The apparatus according to claim 1, further comprising:

25 a detection unit detecting an output of said

gate unit; and

a distance computation unit computing a distance to a target as associated with a phase difference between the basic signal and the received signal using an output of said detection unit when said control pulse generation unit changes the delay amount.

4. The apparatus according to claim 1, further comprising:

a modulation signal generation unit generating a pulse from the basic signal in generating a transmission pulse, and generating a modulation signal for generation of a transmission pulse with a band limit of the spectrum range of the pulse.

5. A pulse radar apparatus which detects a target by transmitting a pulse signal, comprising:

a control pulse generation unit generating a control pulse signal by delaying a signal generated using a first signal which is a basic signal in generating a transmission pulse, a second signal for phase modulation of a frequency lower than the first signal, and a pseudo-random signal for amplitude modulation generated at an intermediate

frequency between the first and second signals; and
a gate unit functioning as a gate for a
received signal using the control pulse signal.

5 6. The apparatus according to claim 5, wherein
said pseudo-random signal is an amplitude
modulation signal for the first signal.

7. The apparatus according to claim 5, wherein
10 said pseudo-random signal is a phase
modulation signal for the first signal, and said
generated signal is a signal in which a pulse
exists in a section in which the pseudo-random
signal is low.

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8. The apparatus according to claim 5, further
comprising:

a detection unit detecting an output of said
gate unit; and

20 a distance computation unit performing
counterspread using the pseudo-random signal on an
output of said detection unit, extracting power of
a frequency area, and computing a distance to a
target as associated with a delay amount indicating
25 a maximum value of the power, when said control

pulse generation unit changes the delay amount.

9. The apparatus according to claim 5, further comprising:

5 a detection unit detecting an output of said gate unit; and

a distance computation unit performing counterspread using the pseudo-random signal on an output of said detection unit, extracting power of
10 a frequency area, and computing a distance to a target as associated with a phase difference between the first basic signal and a received signal, when said control pulse generation unit changes the delay amount.

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10. The apparatus according to claim 5, further comprising:

a modulation signal generation unit generating a pulse from a signal generated using the first
20 signal, the second signal, and the pseudo-random signal, and generating a modulation signal for generation of a transmission pulse with a band limit of a spectrum range of the pulse.

25 11. A pulse radar apparatus which detects a target

by transmitting a pulse signal, comprising:

control pulse generation means for generating a control pulse signal by delaying a basic signal in generating a transmission pulse; and

5 gate means for performing a gate operation on a received signal using the control pulse signal.

12. A pulse radar apparatus which detects a target by transmitting a pulse signal, comprising:

10 control pulse generation means for generating a control pulse signal by delaying a signal generated using a first signal which is a basic signal in generating a transmission pulse, a second signal for phase modulation of a frequency lower
15 than the first signal, and a pseudo-random signal for amplitude modulation generated at an intermediate frequency between the first and second signals; and

gate means for functioning as a gate for a
20 received signal using the control pulse signal.